YAESU
The radio

《 Actual Size 》

C4FM/FM 144/430MHz DUAL BAND
DIGITAL TRANSCEIVER

FT3D

《 FT3DR: US, Asia and Australia FT3DE: Europe 》

Bluetooth®   micro SD Card   AMS Automatic Mode Select

C4FM DIGITAL CLEAR VOICE
Clear and Crisp Voice Technology   66 ch GPS

High Visibility and Operability with High-Resolution Full-Color TFT & Touch Panel Display
Compact C4FM Digital Transceiver with Dual Simultaneous Receive

Anytime, Anywhere with WIRES-X!
Simpler and Highly-mobile Amateur Radio Internet Communication

Portable Digital Node Function

The Portable Digital Node function enables easy setup and WIRES-X Node operation from any location, such as a Hotel room, Airport, in a Vehicle or a Free Wi-Fi space, etc. A simple and Highly-mobile node operation can be provided.

*Please refer to Yaesu website for the detailed preparation, connection, PC settings and operation of the "Portable Digital Node Function"

C4FM/FM 144/430MHz DUAL BAND DIGITAL TRANSCEIVER

FT3D

C4FM DIGITAL CLEAR VOICE
Clear and Crisp Voice Technology

《 FT3DR: US, Asia and Australia FT3DE: Europe 》

(2200mAh Li-ion Battery SBR-14LI, Battery Charger SAD-25, Antenna, Belt Clip SHB-13 and USB Cable included)

Bluetooth®   **micro SD Card**

AMS Automatic Mode Select   **66 ch GPS**

WIRES-X

Portable Digital Node

《 Actual Size 》

Compact & Reliable 5 W RF Power Output

The FT3D provides reliable 5 Watts RF power output in a compact (W2.44"x H3.94"x D1.28": 62 x 100 x 32.5mm) and light weight (9.95 oz: 282g) body. Four selectable RF output power level settings, 5W/2.5W/1W/0.3W are available individually per frequency bands for battery power-saving choices.

700mW of Exceptional Quality Audio

Even in a compact body the user enjoys loud and clear C4FM voice quality from the 700mW of audio power that has been carefully tuned to enable clear and comfortable communication.

Loud and Clear
C4FM Voice Quality

## Easy Hands-free Operation with Built-in Bluetooth® unit

A Bluetooth® unit is installed in FT3D enables hands-free operation using either the optional Yaesu Bluetooth® headset SSM-BT10 or a commercially available product.
In addition to transmission of the PTT button function from the SSM-BT10 headset, it also supports voice activated transmission (VOX) function, so you can possible to operate FT3D completely hands-free while putting it in a pocket or backpack.

Superior Operability with the Combination of a High-Resolution Full-color Touch panel and Dedicated keys

FT3D' s high resolution 320x240 dot matrix full color TFT LCD display, highlights the frequency of the operational band and also displays the MODE, STATUS and function setting menu using the touch screen functions of the display for changing the mode, direct frequency entry and various settings from the function menu display.

Frequently used functions have been assigned to dedicated keys at the bottom of the display enabling quick and easy access using one of the One-Touch button arrangement.

DISPLAY TX/RX MEMORY
SIGNALING SCAN GM
WIRES X CONFIG APRS
SD CARD OPTION CALLSIGN

Set mode Screen

Three One-Touch-panel keys: "Function menu", "TX mode select", "Communication mode select"

Seven dedicated keys: Access frequently used features with one-touch

146.520
1	2	3
4	5	6
7	8	9
⊗	0	ENT

Frequency Direct Input

Simultaneous C4FM/C4FM Standby

The FT3D supports simultaneous C4FM Digital monitoring for both the A and B-bands.
This means for example that you can listen in on WIRES-X communications in other bands and frequencies while waiting for a CQ call in C4FM Digital. Only the voice of the first received C4FM Digital transmission will be heard, but the call sign and position information as well as other data can be received simultaneously.
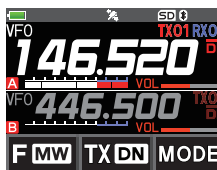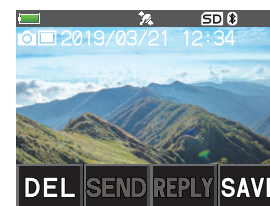
Real Dual Band Operation (V+V/U+U/V+U/U+V)

With two independent receivers, you may listen to either the same or different bands simultaneously.
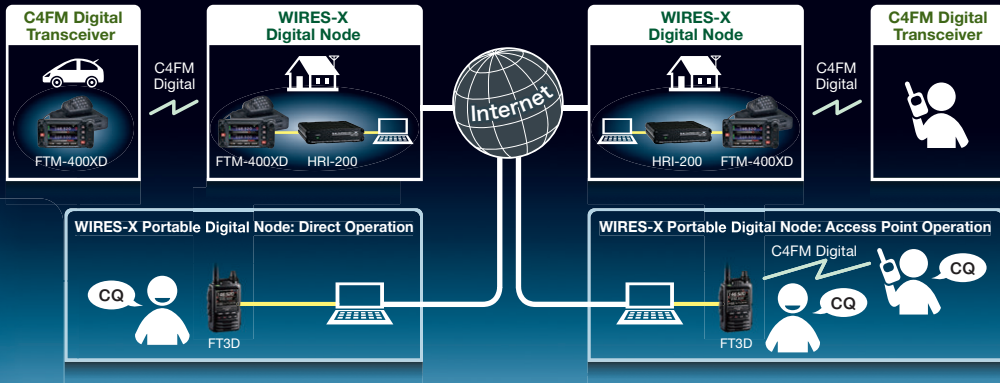
Snapshot Feature (Transmit/Receive Image data)

You can easily take a snapshot by connecting the built-in camera microphone MH-85A11U (optional). The captured image is displayed with full color, and you can send the image to other C4FM digital transceivers by pressing the send image button on the microphone.
You can also display a snapshot image sent from a friend on a full color display.
The date and time of taking the photo and location information data are stored in the image data, and it is a very useful function such as navigating to the location where the photo was taken by using the backtrack function. Images are stored on the micro SD card, so they can be recalled and sent later or edited on a PC.

DEL SEND REPLY SAVE

Snapshot Image

| C4FM Digital Transceiver | | WIRES-X Digital Node | | | WIRES-X Digital Node | | C4FM Digital Transceiver |

Internet

C4FM Digital

FTM-400XD — FTM-400XD HRI-200 — HRI-200 FTM-400XD

WIRES-X Portable Digital Node: Direct Operation

CQ — FT3D

WIRES-X Portable Digital Node: Access Point Operation

C4FM Digital CQ CQ — FT3D

Advanced Features of Portable Digital Node Function

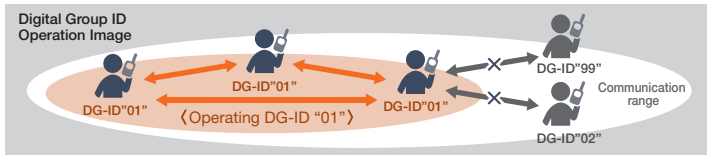| Digital Node Operation with an Internet connection at remote Location | Easy Connection requires only a C4FM digital transceiver and PC compatible with portable digital node function | · No need to open an Ethernet port
· No fixed or dynamic global IP address is required |

WIRES-X

Portable Digital Node

【 Direct Operation 】

In "Direct Operation", the Portable Node station transceiver is used only for WIRES-X internet communications without transmitting or receiving local "On Air" radio signals.

【 Access Point Operation 】

In "Access Point Operation" the Portable Node station can be used to communicate "On Air" and relay nearby local C4FM digital transceivers, while simultaneously connected with the Internet WIRES-X digital rooms and digital node stations.

Excellent Features of C4FM Digital Communication

Sophisticated Digital Group ID (DG-ID) Operation

Digital-Group-ID (DG-ID) "00 to 99", in the C4FM digital Mode, can be easily configured by each group member to facilitate communications between the specific group participants.

Digital Group ID Operation Image
DG-ID"01" DG-ID"01" 《Operating DG-ID "01"》 DG-ID"01" DG-ID"99" Communication range DG-ID"02"

FM friendly Digital Communications by AMS (Automatic Mode Select)

FM friendly digital operation is made possible by AMS (Automatic Mode Select). AMS automatically determines whether the received signal is C4FM Digital or conventional FM, and sets the receiver to the appropriate mode. The AMS function enables hassle-free operation by removing the need for users to manually switch between modes.

V/D Mode — Voice FR Mode — AMS — Data FR Mode — Analog FM Mode
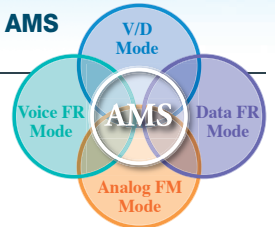
Digital Group Monitor (GM) Function

The Digital Group Monitor (GM) function automatically checks whether the station operating the GM function on the same frequency and with the same DG-ID is within communication range. The distance and direction for each call-sign (station) information is shown on the screen. This feature allows you to easily check the position up to 24 stations within the communications area.

Group Monitor Display

Smart Navigation Function is also Available in Full color

● Real Time Navigation Feature

Digital V/D Mode communicates additional information such as position data at the same time as the voice signal, allowing you for example to view the distance and direction of the other station in real time while communicating.

● Backtrack Feature

Backtrack feature initiates navigation to a pre-registered starting point. You can constantly check the direction and distance from your current position and it allows navigation back to the departure point, or a point previously added to the memory.

Advanced Features that Ensures Ease of Operation

Full-fledged wide-band reception with high sensitivity

In addition to full operation on the 144MHz and 430MHz Amateur bands, the FT3D provides wide-range coverage from 0.5MHz - 999.99MHz (A Band), 108MHz - 580MHz (B Band), continuous reception.

Built-in High Precision GPS Antenna

The FT3D comes standard with a high-sensitivity 66 channel GPS antenna (located at the top of the unit). The time required for acquiring position information as well as the accuracy have been further improved. In C4FM digital mode, you can display the position and direction of the partner station in real time.

High-precision GPS antenna position

1200/9600bps APRS® Data communication

APRS® information display, received station list display, message transfer as well as SmartBeaconing™ are all supported. You will be able to display the APRS information, station list; and use the message, SmartBeaconing™ function and, also you can track your APRS® movement on the Internet websites.

APRS®Display
FT3D displays the positions, heading directions of the APRS received station,distances, icons (48 kinds), weather information, object, etc.
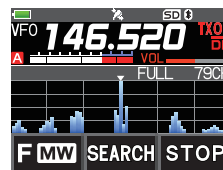
APRS®List
The station List function stores up to 60 stations with their individual APRS® data

APRS Display

## High-resolution Band scope with Fast display of up to 79 channels

The FT3D band scope function displays up to 79 channels centered around the current VFO frequency in real time with high speed.

Band scope Display image

CAM (Club channel Activity Monitor) function

Club registered memory channels can be scanned and signal strength can be monitored in real time. By ghosting the signal strength of past peaks, it is possible to easy monitor the current receiving status. In addition, it is very convenient because it can be adjusted to the receiving frequency with one touch of the channel bar. (Up to 5 channels can be registered / displayed)
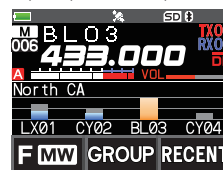
CAM Display

Recording Function

It is possible to record the received voice of the other station or the voice sent from the FT3D. You can select the recording settings such as the setting of the band to record (A band /B band/ both) and the recording of the transmit voice. The recorded audio data is saved as an audio file on the micro SD card, and you can play and listen anytime.

Includes 2,200mAh High-capacity Lithium-ion Battery

The high-capacity lithium-Ion battery pack SBR-14LI (2,200mAh) comes standard with the Transceiver.

■BATTERY OPERATING TIME (Approximately)

Band	Operating Time (SBR-14LI)
144 MHz	9.5hours
430 MHz	8hours

*Duty Cycle based on Tx 6 seconds (5 W): Rx 6 seconds (VOL Level 16): Standby 48 seconds (RX SAVE 1:5) Operating time may vary depending on operating conditions

Simultaneous AM/FM broadcast Reception and 2-channel Monitoring

You can listen to AM or FM radio stations while monitoring two frequency channels.
Two independent receivers will allow you to listen to your favorite AM or FM broadcast station and monitor two different bands ("A band" and "B band") at the same time.

micro SD Card Slot

The FT3D accepts commercially available micro SD cards (up to 32 GB) for storage of GPS logger data (recorded track information can be displayed later by using map software on your PC). Backing up the memory of the unit and storing image data and other useful information on the card is also possible.
By using the SD card, it is also possible to clone the radio data to other compatible radios.

Other Practical Features

- Large-capacity 1256ch memory and twenty-four 100ch memory banks
- Illuminated keyboard that will permit easy operation in dark or poor lighting
- Easy to use dual-axis knob allows convenient volume control and dial operation
- Memory ALPHA TAG up to 16 characters
- Built-in CTCSS, DCS, Pager (EPCS) function encode/decode enables Selective call features
- DTMF Encode
- DTMF Memory
- ARS(Automatic Repeater Shift)
- Built-in On/Off Timer, Automatic Power Off (APO) and Time-out Timer (TOT)
- Versatile Scanning
- NOAA Weather alert: available in-service area*
- GPS data output feature
- External DC input
- Password Lock function
- Water Protection IPX5 Rating

* Check local regulations for availability in your region.

Specifications

General

Frequency Ranges

A (Main) Band RX: 0.5 - 1.8MHz (AM Radio)
1.8 - 30MHz (SW Radio)
30 - 76*1 (88*2)MHz (50MHz HAM)
76*1 (88*2) - 108MHz (FM Radio)
108 - 137MHz (Air Band)
137 - 174MHz (144 MHz HAM)
174 - 222MHz (VHF Band)
222 - 420MHz (GEN1)
420 - 470MHz (430 MHz HAM)
470 - 800MHz（UHF Band）
800 - 999.99MHz（GEN2)*3

B (Sub) Band RX: 108 - 137MHz (Air Band)
137 - 174MHz (144 MHz HAM)
174 - 222MHz (VHF Band)
222 - 420MHz (GEN1)
420 - 470MHz (430 MHz HAM)
470 - 580MHz (UHF Band)

TX: 144 - 148MHz or 144 - 146MHz
430 - 450MHz or 430 - 440MHz

Channel Steps: 5, 6.25, 8.33, 9, 10, 12.5, 15, 20, 25, 50, 100kHz
(8.33kHz : only for Air band, 9kHz : only for AM Radio)

Frequency Stability: ±2.5ppm -4°F to +140°F (-20°C to +60°C)

Emission Type: F1D, F2D, F3E, F7W

Supply Voltage: Nominal: 7.2V DC, Negative Ground (SBR-14LI)
7.4V DC, Negative Ground (FNB-101LI)
10.5 - 16V DC, Negative Ground (EXT DC JACK)
Operating: 5.5 - 8.4V DC,Negative Ground (Li-ion Battery pack)
6 - 16V DC, Negative Ground (EXT DC)
10.5 - 16V DC, Negative Ground (EXT DC: for Charging)
3.6 - 4.5V DC, Negative Ground (with FBA-39)

Current Consumption: 140mA (Mono band Receive)
170mA (Dual band Receive)
86mA (Mono band Receive, Standby)
120mA (Dual band Receive, Standby)
67mA (Mono band Receive, Standby, Saver On "Save Ratio 1:10")
67mA (Dual band Receive, Standby, Saver On "Save Ratio 1:10")
+18mA (GPS On)
+6mA (Digital)
120mA (Mono band Receive AM/FM Radio)
900µA (Auto Power Off)
1.6A (5W TX, 144MHz 7.2V DC)
1.9A (5W TX, 430MHz 7.2V DC)

Operating Temperature: -4° F to +140° F (-20°C to +60°C)

Case Size: 2.44"(W) × 3.94"(H) × 1.28"(D) (62 × 100 × 32.5 mm)
(w/SBR-14LI, w/o knob, antenna, & belt clip)

Weight (Approx.): 9.95 oz (282g) w/SBR-14LI, antenna

Transmitter

RF Power Output: 5W/ 2.5W/ 1W/ 0.3W (@ Battery pack or EXT DC)
0.9W/ 0.3W (@ FBA-39)

Modulation Type: F1D, F2D, F3E:Variable Reactance modulation
F7W: 4FSK (C4FM)

Spurious Emission: At least 60dB below (@TX Power Hi, L3)
At least 50dB below (@TX Power L2, L1)

Receiver

Circuit Type: AM, NFM: Double-Conversion Super heterodyne
AM/FM Radio: Direct-Conversion

Intermediate Frequencies: 1st: 58.05MHz (AM, NFM A Band)
1st: 57.15MHz (AM, NFM B Band)
2nd: 450kHz (AM, NFM)

Sensitivity: 3µV for 10dB SN (0.5 - 30MHz, @AM)
0.35µV TYP for 12dB SINAD (30 - 54MHz, @NFM)
1µV TYP for 12dB SINAD (54 - 76*1 (88*2)MHz, @NFM
1.5µV TYP for 12dB SINAD (76*1 (88*2) - 108MHz, @WFM)
1.5µV TYP for 10dB SN (108 - 137MHz, @AM)
0.2µV for 12dB SINAD (137 - 140MHz, @NFM)
0.16µV for 12dB SINAD (140 - 150MHz, @NFM)
0.2µV for 12dB SINAD (150 - 174MHz, @NFM)
1µV for 12dB SINAD (174 - 222MHz, @NFM)
0.5µV for 12dB SINAD (300 - 350MHz, @NFM)
0.2µV for 12dB SINAD (350 - 400MHz, @NFM)
0.18µV for 12dB SINAD (400 - 470MHz, @NFM)
1.5µV for 12dB SINAD (470 - 580MHz, @NFM)
3µV TYP for 12dB SINAD (580 - 800MHz, @NFM)
1.5µV TYP for 12dB SINAD (800 - 999MHz, @NFM)*3
0.19µV TYP for BER 1% (Digital Mode)

Selectivity: NFM, AM 12kHz / 35kHz (-6dB / -60dB)

AF Output: 700mW (16Ω for 10% THD) Internal Speaker
300mW (8Ω for 1 % THD) External Speaker Jack

*1 USA, Asia, Australia versions   *2 Europe version   *3 USA Cellular Blocked   ■ Specifications are subject to change without notice, and are guaranteed within the amateur bands only. Frequency ranges and functions will vary according to transceiver version; check with your dealer.

Option

MH-85A11U
Speaker Microphone with Snapshot camera

MH-34B4B
Speaker / Microphone

SSM-57A
Earpiece Microphone

SSM-63A
VOX Headset

SSM-BT10
Bluetooth® Headset

CT-44
Microphone Adapter

FNB-101LI
Lithium Ion Battery Pack (1100 mAh)
(The belt clip differs from the SHB-13 supplied with the unit.)

SBR-14LI*4
Lithium Ion Battery Pack (2200 mAh)
(The belt clip differs from the SHB-13 supplied with the unit.)

SAD-25*4
Battery Charger

CD-41
Rapid Charger

FBA-39
3x "AA" Cell Battery Tray
(The belt clip differs from the SHB-13 supplied with the unit.)

CN-3
BNC-to-SMA Adapter

E-DC-6
DC Cable

SDD-13
DC Cable with Cigarette-Lighter Plug

SHC-34
Soft Case

CT-169
PC Connection Cable (Dsub9)

CT-170
Data Cable

CT-176
Data Cable (2.5φ)

CT-168
Cloning Cable

SHB-13*4
Belt Clip

SCU-39
WIRES-X Connection Cable Kit
(PC connection cable: SCU-19, Adapter: CT-44 and Audio cable x 2 included)

*4 The same as the supplied accessory   ■ APRS® is a registered trademark of Bob Bruninga, WB4APR. SmartBeaconing™ from HamHUD Nichetronix.
■ Bluetooth® name and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such trademarks by Yaesu Co., Ltd. is under license. Other trademarks and trade names are those of their respective owners.